REMARKS

Claims 1-19 stand rejected. Claims 1, 2 and 5-19 have been amended. No claims have been canceled or added. Therefore, claims 1-19 remain pending in the present application.

Claims 1-4 and 13 stand rejected under 35 U.S.C. 102(b) allegedly as being anticipated by "Stochastic Approaches to compute Shared Mesh Restored Lightpaths in Optical Network Architectures" by Bouillet, E., Labourdette, J-F, Ellinas, G., Ramamurthy, R.,and Chaudhuri, S., ("Bouillet"). In particular, the office action suggests, *inter alia*, that Bouillet's page 804, left column, paragraph 5 describes computing an estimated cost of a second shortest path in accordance with the features recited in claim 1. With all due respect to the contentions in the office action, applicants respectfully disagree.

Claim 1 has been amended to further clarify the novel features. Claim 1 recites computing an estimated cost of a second shortest past in a certain novel way. In particular, the second shortest path's estimated cost is based on the costs of the communication links that are found when traversing the second shortest path. Correspondingly, the costs of those communication links are influenced by a probability that the links can be ***shared with another path***, in addition to the second shortest path. The additional path is provisioned using a channel of the link.

As noted in the present Summary of the Invention section, this technique "results in efficient use of network resources, using only the network state information available locally at each network element." (*Specification* – paragraph [0017]). Also, these techniques "use probability theory to develop an estimate of protection channel sharing opportunities and encourages sharing of protection channels." (*Id.*).

Contrary to the contentions in the office action, neither Bouillet's page 804, left column, paragraph 5 nor any other portion of Bouillet teaches or even suggests computing an estimated cost of a second shortest path in such the manner recited in claim 1. Quite the contrary, the cited portion of Bouillet teaches using a wholly different method. The cited portion of Bouillet is as follows:

> (i) To each edge that shares a SRG with w_i or has neither available channel nor reserved channel, assign infinite weight

(ii) For each edge without a reserved channel, set weight to cost of edge

(iii) For each edge with reserved channel, set weight to cost of edge times the probability that no reserved channel is shareable (by way of the approach presented earlier in section C of this document.)

(iv) Compute the shortest path s_i using the metric defined in parts (i) to (iii), and set $S \rightarrow S+\{w_i,s_i\}$.

As is evident from the very text itself, Bouillet's methodology requires, *inter alia*: (1) assigning an infinite weight for an edge without an available channel, (2) using a cost of an edge if it has no reserved channel, and (3) using the cost of an edge multiplied by a different probability if it has a reserved channel. Again, this is very different from the method recited in claim 1, which makes cost assessments based upon link sharing capabilities, not channel availability as with Bouillet.

Accordingly, applicants respectfully request withdrawal of the rejection of claims 1-4 and 13 under 35 U.S.C. 102(b) over Bouillet.

In addition, claims 5-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bouillet in view of U.S. Patent Publication No. 2004/0042406 to Wu *et al.* ("Wu"). Also, claims 14-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bouillet in view of U.S. Patent Publication No. 2003/0147352 to Ishibashi *et al.*, ("Ishibashi").

For the same reasons discussed above with respect to claims 1-4 and 13 under 35 U.S.C. 102(b) over Bouillet, applicants respectfully request withdrawal of the rejections of claims 5-12 over Bouillet and Wu, and claims 14-19 over Bouillet and Ishibashi.

Conclusion

In view of the foregoing, applicant respectfully submits that the claims are allowable and that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the present application for any reason, the Examiner is encouraged to contact the undersigned attorney, Vincent J. Roccia at (215) 564-8946, to discuss resolution of any remaining issues.

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